



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/729,166	12/05/2003	Manish Anand Bhide	JP920030164US1	8579

7590 05/19/2006

Frederick W. Gibb, III
McGinn & Gibb, PLLC
Suite 304
2568-A Riva Road
Annapolis, MD 21401

EXAMINER

SYED, FARHAN M

ART UNIT PAPER NUMBER

2165

DATE MAILED: 05/19/2006

Please find below and/or attached an Office communication concerning this application or proceeding..

Office Action Summary	Application No. 10/729,166	Applicant(s) BHIDE ET AL.	
	Examiner Farhan M. Syed	Art Unit 2165	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 05 December 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-15 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-15 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 05 December 2003 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>20031205</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. Claims 1-15 are pending.

Drawings

2. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they include the following reference character(s) not mentioned in the description: Figure 1, items 100, 105, and 110; Figure 4, items 400 and 435. Corrected drawing sheets in compliance with 37 CFR 1.121(d), or amendment to the specification to add the reference character(s) in the description in compliance with 37 CFR 1.121(b) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.


Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

Art Unit: 2165

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1-15 are rejected under 35 U.S.C. 102(b) as being anticipated by a non-patent literature titled "Active Database Systems" by Umeshwar Dayal, Eric N. Hanson, and Jennifer Wisdom, Addison-Wesley, Sept. ¹⁹⁹⁴~~2004~~ (and known hereinafter as Dayal). 

As per claims 1 and 13-15, Dayal teaches a method of monitoring events in a database comprising the steps of (i.e. *"An active database system, in contrast, is a database system that monitors situations of interest, and when they occur, triggers an appropriate response in a timely manner."* The preceding text clearly indicates that monitoring events in a database is an active database system.)(Page 1, paragraph 3); storing in the database at least one database rule (i.e. *"The desired behavior is expressed in production rules (also called event-condition-action rules), which are defined and stored in the database."* The preceding text clearly indicates that storing production rules indicates that at least one rule is stored in the database.)(Page 1, paragraph 3); mapping temporal constraints of an event of the database rule to corresponding temporal events (i.e. *"An inference engine cycles through all the rules in the system, matching the condition parts of the rules with the data in working memory."* The preceding text clearly indicates that mapping is matching and temporal constraints are conditions that contain time and event.)(Page 1, paragraph 3); changing the temporal constraints associated with the temporal events based upon temporal constraints for related events of the database rule (i.e. *"The action part may modify the working memory, possibly according to the matched data, and the cycle continues until no more rules match."* The preceding text clearly indicates that changing the temporal constraints is modifying the condition, which is the action part of the working memory.)(Page 1, paragraph 3); and selectively deploying and

selectively removing the temporal events from the database based upon the changed temporal constraints (i.e. *"Rules are structured objects, having events, conditions and actions as their components. Like any object, rules can be created, deleted, or modified. In addition, rule objects have some special operations, including: fire, which causes a rule to be triggered; enable, which cases a rule to be activated; disable, which causes a rule to be deactivated (so that it won't be triggered even if its triggered event occurs."* The preceding text clearly indicates that selectively deploying is enable, which cases the trigger to be activated and selectively removing is disable, which cases the trigger to be deactivated.)(Page 3, paragraph 3).

As per claim 2, Dayal teaches a method further comprising the step of removing from the database temporal events that cannot evaluate as true (i.e. *"Most database rule systems handle errors during rule processing by aborting the current transaction, since this is how conventional database systems typically handle errors during transaction processing."*)(Page 17, paragraph 2).

As per claim 3, Dayal teaches a method further comprising the step of limiting the lifespan of an event to the overlapping period of the lifespan of a parent event (i.e. *"The nested transaction model used in HiPAC allows some of these possibilities. When a rule execution sub transaction fails, the failure event is returned to its parent, which has the option of spawning a sibling subtransaction to repair the error (this may be accomplished through the firing of another rule that is triggered by the failure event). Alternatively, failure can be propagated up the transaction tree all the way to the root (top) transaction."*)(Page 17, paragraph 3).

As per claim 4, Dayal teaches a method further comprising the step of changing the lifespan of an event to omit periods in which the event cannot evaluate as true (i.e. *"In general, when a triggered rule is executed in Ariel, the rule processes the entire set of triggering changes, including both the user-generated changes that initiated the rule processing and any subsequent changes made by rule actions"* *"Some languages have sequential execution semantics, while others allow concurrent execution. With either sequential or concurrent execution semantics, there is also the issue of whether one rule can trigger the execution of another rule or of (another instance of) the same rule. Clearly, if such nested triggering is allowed, termination is a concern."* The preceding text clearly indicates that when the author mentioned termination is a concern, an ordinary person skilled in the art understands that termination or abort must take place when the event cannot evaluate as true.)(Page 12, paragraph 1; page 11, paragraph 1).

As per claim 5, Dayal teaches a method further comprising the step of assigning a lifespan of an event having an undefined lifespan as the lifespan of a parent event (i.e. *"In addition, some languages provide mechanisms whereby data (parameters) can be bound in the event and/or condition part of a rule, then passed to the condition and/or action."* *"The nested transaction model used in HiPAC allows some of these possibilities. When a rule execution sub transaction fails, the failure event is returned to its parent, which has the option of spawning a sibling subtransaction to repair the error (this may be accomplished through the firing of another rule that is triggered by the failure event). Alternatively, failure can be propagated up the transaction tree all the way to the root (top) transaction."*)(Page 3, paragraph 5; page 17, paragraph 3).

As per claim 6, Dayal teaches a method further comprising the step of propagating the lifespan or context of the parent node to all children nodes of the parent node (i.e. *"The nested transaction model used in HiPAC allows some of these possibilities. When a rule*

execution sub transaction fails, the failure event is returned to its parent, which has the option of spawning a sibling subtransaction to repair the error (this may be accomplished through the firing of another rule that is triggered by the failure event). Alternatively, failure can be propagated up the transaction tree all the way to the root (top) transaction.”(Page 17, paragraph 3).

As per claim 7, Dayal teaches a method wherein a lifespan of an event is expressed as a predetermined duration of time (i.e. *“In addition, some languages provide mechanisms whereby data (parameters) can be bound in the event and/or condition part of a rule, then passed to the condition and/or action.” “Some languages support rules triggered by temporal events. These might be absolute (e.g.: 08:00:00 hours on January 1, 1994), relative (e.g., 5 seconds after takeoff), or periodic (e.g., 17:00:00 hours every Friday).”*(Page 3, paragraph 5; page 5, paragraph 2).

As per claim 8, Dayal teaches a method wherein the lifespan is dependent upon the associated event (i.e. *“In addition, some languages provide mechanisms whereby data (parameters) can be bound in the event and/or condition part of a rule, then passed to the condition and/or action.”*(Page 3, paragraph 5).

As per claim 9, Dayal teaches a method wherein the lifespan ends at a predetermined time, or recurs at a predetermined period of time (i.e. *“Some languages support rules triggered by temporal events. These might be absolute (e.g.: 08:00:00 hours on January 1, 1994), relative (e.g., 5 seconds after takeoff), or periodic (e.g., 17:00:00 hours every Friday).”*(Page 5, paragraph 2).

As per claim 10, Dayal teaches a method further comprising the step of combining events using a sequence operator to form a composite event having a time span (i.e. *"Some languages support rules triggered by temporal events. These might be absolute (e.g.: 08:00:00 hours on January 1, 1994), relative (e.g., 5 seconds after takeoff), or periodic (e.g., 17:00:00 hours every Friday)."* *"When an instance of this event type occurs, the formal parameters are bound to a specific employee (the one whose salary is being updated) and two specific integers (this employee's old salary and new salary)."*)(Page 5, paragraph 2; page 6, paragraph 3).

As per claim 11, Dayal teaches a method further comprising the step of associating a lifespan with the sequence operator (i.e. *"Most importantly, unlike in AI systems, in active database systems rule processing is integrated with conventional database activity – queries, modifications, and transactions – and it is this activity that causes rules to become triggered and initiates rule processing."* The preceding text clearly indicates that a lifespan is contained within a rule that processes queries, modifications, and transactions, and the sequence operator is the active database system that initiates rule processing.)(Page 10, paragraph 3).

As per claim 12, Dayal teaches a method further comprising the step of storing a database rule as an event-condition-action (ECA) rule (i.e. *"The desired behavior is expressed in production rules (also called event-condition-action rules), which are defined and stored in the database."* The preceding text clearly indicates that ECA rules are stored in a database.)(Page 1, paragraph 3).

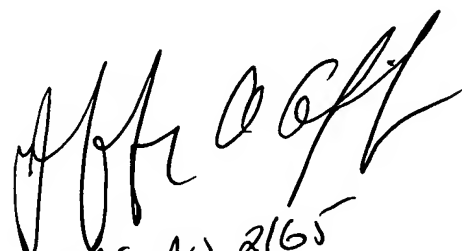
Contact Information

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Farhan M. Syed whose telephone number is 571-272-7191. The examiner can normally be reached on 8:30AM-5:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jeffrey Gaffin can be reached on 571-272-4146. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

FMS


SPE, AU 2165
JEFFREY GAFFIN